AUTHOR INDEX

VOLUME 160

Abe, Mikiko, 510, 517
Adler, Howard, 706
Agabian, Nina, 1137
Aiba, Shuichi, 413
Amano, Ken-Ichi, 982, 989, 994
Amanuma, Hiroshi, 822, 824
Ambulos, Nicholas P., Jr., 1
Ames, Giovanna Ferro-Luzzi, 1181
Amy, Penny S., 1041
Anderson, Beau J., 740, 748
Anderson, R., 879
Andro, Thierry, 1199
Archibald, A. R., 792
Argast, Manfred, 504
Arias, Alicia, 1027
Armel, Paul R., 895
Astwood, Patricia M., 903
Atherly, A. G., 785
Atkinson, Katharine D., 80

Bakker, Evert P., 347, 354
Bankaitis, Vytas A., 612
Barbeyron, Tristan, 586
Baresi, Larry, 365
Barras, Frédéric, 1199
Barrett, John T., 279
Bartlett, Douglas H., 577
Bassford, Philip J., Jr., 612
Beach, Michael J., 294
Beck, Christoph F., 504
Bedard, D. P., 1196
Belfort, Marlene, 371
Bell, Robert M., 711
Benito, Maria C., 473
Benson, David R., 636
Bernlohr, Robert W., 591
Bertheau, Yves, 1199
Biely, Peter, 408
Bills, Margaret M., 748
Blanquet, Sylvain, 1115
Bohin, Jean-Pierre, 976
Boling, Maxon, 706
Booth, Ian R., 22
Bornstein, Susan M., 42
Botsford, James L., 826
Boussiba, Samy, 204
Bradley, Rebecca A., 958
Braus, Gerhard, 504
Broda, Paul, 470
Brusilow, William S. A., 1055
Buchholz, Wallace G., 319, 327
Burke, S. K., 55
Burns, R. O., 833
Butnick, Nancy Z., 533, 541
Buu-Hoi, Annie, 87

Cabrera-Juárez, Emiliano, 662
Cairney, John, 22
Campbell, L. A., 288
Canepari, Pietro, 427
Carlemalm, Eric, 143
Carlton, Bruce C., 854
Cattaneo, Jeannette, 1199
Cauble, Susan M., 438
Cen, Ying Hua, 483
Cerveñanský, Carlos, 1027
Chambost, Jean-Pierre, 1199
Champe, Sewell P., 533, 541
Chang, C. J., 488
Charon, Nyles W., 1067
Chaudhry, G. Rasul, 607
Chaudhury, Abdul M., 788
Chen, Hen Cai, 483
Clark, Alvin J., 702
Clark, David P., 687
Clewell, Don B., 1109
Cline, Michael L., 556
Cohen, Shulamit, 1146
Coleman, J. P., 1163
Coleno, Alain, 1199
Cooper, Terrance G., 1078
Costerton, J. W., 569
Cox, Graeme B., 764
Cronan, John E., Jr., 1088
Crosa, Jorge H., 256, 860

Daneo-Moore, Lolita, 427, 935
Dardel, Frédéric, 1115
Das, Anathbandhu, 805
Datta, Atin R., 808
Daugherty, Robin M., 76
Daughtry, Glen R., 1067
Daum, Robert S., 815
Davidson, Barrie E., 169
Dazzo, Frank B., 510, 517
Dean, Donald H., 1178
DeBusk, Ruth Mason, 493, 656
Del Mar Lléo, Maria, 427
Deonier, Richard C., 1175
DiGuiseppi, James L., 137
Dilling, Waltraud, 204
Dodd, Douglas C., 227
Doi, Roy H., 442
Donachie, William D., 546, 724
Dong, Xinnian, 28
Dosch, Donald C., 1188
Doudney, Charles O., 233
Downie, J. Allan, 903
Drake, Harold L., 466
Drews, Gerhart, 107
Durham, Don R., 771, 778

Egerton, John R., 740, 748
Eisenstein, Barry I., 199, 227
Elbein, Alan D., 67
Elhai, Jeffrey, 781
Elleman, Thomas C., 1184
Ellis, Daniel M., 1178
Ely, Bert, 279
Emery, Thomas, 801
Engleberg, N. Cary, 199
Epstein, Wolfgang, 1188
Escamilla, Jose E., 473
Esmon, Pamela C., 966
Evers, Dierk, 107

Fahrney, David E., 50
Falkow, Stanley, 61
Fayat, Guy, 1115
Ferrari, Eugenio, 15
Ferry, James G., 521, 526
Fimmel, Anthony L., 764
Finan, Turlough M., 454
Finette, Barry A., 1003
Finlay, B. Brett, 402
Fishel, Richard A., 1168
Fiske, Michael J., 676
Fontaine, Mark S., 921
Fontana, Roberta, 427
Forage, R. G., 55
Forrest, Susan M., 169
Forterre, Patrick, 586
Franich, Karen, 438
Franz, Gunter N., 1067
Freese, Ernst, 607
Fridovich, Irwin, 137
Friesen, James D., 1093
Frost, Laura S., 395, 402
Fukuda, Yasuki, 1101
Fulton, Gail L., 718
Funk, Cindee, 112
Futai, Masamitsu, 812

Gauthier, Lucie, 755
Gefter, Malcolm L., 454
Genthner, Fred J., 971
Ghosh, Sudhamoy, 1204
Gibson, Carolyn W., 935
Gibson, David T., 1003
Gibson, Frank, 764
Gibson, Jane, 204
Gibson, Margaret M., 122
Gill, John F., Jr., 294
Gilvarg, Charles, 943
Gober, J. W., 216
Goebel, Werner, 161
Goguen, Jon D., 842
Goldberg, Steven L., 239
Gonneau, Martine, 884
Gottesman, Susan, 184
Götz, Friedrich, 273, 462
Gourse, Richard L., 1022
Grabau, Charlotte, 1088
Grajeda, Jesus, 438
Griffin, Kathleen, 662
Gritzmacher, Christine A., 1165
Guijarro, Jose M., 874
Guiney, Donald G., Jr., 451
Gupta, Krishna Dutta, 1204
Gustafsson, Petter, 434

Haas, Dieter, 928
Hageman, James H., 438
Halpern, Yeheskel S., 607
Harayama, Shigeaki, 251
Härtlein, Michael, 161
Harvey, Steve, 682
Harwood, Caroline S., 622, 797
Hatch, Lyndall, 764
Hatfull, Graham F., 546
Hausman, Sally Z., 211
Heincz, Maria C., 42
Hengstenberg, Wolfgang, 333
Henner, Dennis J., 15
Hermann, Theron E., 533
Heron, David S., 1061
Herrero, Antonia, 781
Heym, Gloria A., 958
Higgins, Christopher F., 22, 122, 131
Higgins, Michael L., 935
Hill, C. W., 682
Hillen, Wolfgang, 499
Hirata, Haruhisa, 9
Hirato, Toru, 421
Hobot, Jan A., 143
Hohn, Barbara, 781
Hollingsworth, Rawle I., 510, 517
Horiuchi, Hiroyuki, 1017
Hoyne, Peter A., 1184

Imanaka, Tadayuki, 413
Imhoff, Johannes F., 478
Inouye, Shigeharu, 889
Irvin, R. T., 569
Ishiguro, Naotaka, 421, 642
Ito, Koreaki, 696
Iwamatsu, Katsuyoshi, 889

Jackson, Barbara J., 976
James, Allen P., 1105
Jamieson, Derek J., 131
Jans, David A., 764
Johansen, Eric, 454
Johnson, E. A., 55
Johnston, G. C., 1196
Juarez, Antonio, 161
Juni, Elliot, 958

Kalla, S. Roger, 434
Kamekura, Masahiro, 385
Kamp, Dietmar, 299
Kane, James F., 676
Kaper, James B., 808
Karamata, D., 1123
Kashket, E. R., 216
Kasian, Paul A., 175
Katakura, Yoshio, 413
Kawamura, Fujio, 442
Kean, Katherine, 586
Keener, Sherry L., 153
Kellenberger, Edward, 143
Kellum, Rebecca, 466
Kenan, Daniel J., 546
Kennedy, Eugene P., 976
Keweloh, Heribert W., 354
Keweloh, Heribert, 347
Kimura, Akira, 1101
Kinoshita, Nobuhiro, 1074
Klages, Uwe, 618
Kley-Raymann, Marta, 928
Klionsky, Daniel J., 1055
Knauf, Vic, 564
Knowles, Roger, 103
Kobayashi, Hiroshi, 1074
Kolodner, Richard, 1168
Korhonen, Timo K., 691
Kotoujansky, Alain, 1199
Koyama, Yoshinori, 733
Krauss, Susanne, 618
Kronstad, James W., 95
Kumagai, Hidehiko, 341, 1031
Kurtz, Myra Berman, 533, 541
Kushner, Donn J., 385
Kustu, Sydney, 1181

Lacks, Sanford A., 867
Lagunas, Rosario, 874
Lampel, Jay S., 1178

Lancelle, Susan A., 921
LaRossa, Robert A., 391
Larson, Timothy J., 711
Lawlor, Kathleen M., 266
Le Goffic, François, 884
Lehner, Andreas F., 682
Lehrbach, Philip R., 251
Lengeler, Joseph, 360
Levy, Stuart B., 87
Li, A. W., 1196
Lidstrom, Mary E., 718
Lin, E. C. C., 55
Lingens, Franz, 618
Linzmeier, Rose, 36
Lobo, Zita, 222
Lodge, Jeffrey S., 801
Loewen, Peter C., 668
London, Jack, 211
Love, Paul E., 910
Lovett, Paul S., 1
Lovley, Derek R., 521
Luckow, Verne A., 28
Ludtke, Douglas N., 711

Maas, Werner K., 430
MacArthur, Angela E., 792
MacDonald, Malcolm J., 469
MacQuillan, Anthony M., 808
Macrina, Francis L., 556
Magasanik, Boris, 379
Maier, Robert J., 448
Malamy, Michael H., 192
Mandrand-Berthelot, Marie-Andrée, 600
Mango, Susan, 379
Mannarelli, Bruno M., 867
Margossian, Linda J., 702
Markus, Astrid, 618
Marrero, Robert, 458
Marshall, Bonnie, 87
Martinez, Asuncion F., 28
Masker, Warren, 706
Mata-Gilsinger, Mireille, 600
Matin, Abdul, 1041
Matsuhashi, Michio, 889
Matsumura, Masazumi, 413
Matsumura, Philip, 36, 577
Matsuzawa, Hiroshi, 733
Mattick, John S., 740, 748
Matzanke, Berthold F., 313
Mayrand, Denis, 755
Mazaitis, Anthony J., 430
Mazzucco, Charles E., 636
McCaul, Thomas F., 982
McCowan, Gloria W., 438
McCuskey, Robert S., 1067
McEntee, Kevin, 153
McFall, Elizabeth, 42
McNamee, Clyde G., 771
McNamee, Kevin P., 153
Merberg, David, 448
Mevarech, Moshe, 1158
Michaeli, Shulamit, 1158
Miller, Jeff F., 192
Mitchell, Michael, 67
Mitra, Gopa, 245
Miyata, Aiko, 889
Molyneux, Russell J., 67
Mongkolsuk, Skorn, 1
Montoya, Alice, 564
Morrison, Nigel A., 482
Mott, Margaret R., 740
Müller, Gertraud, 304, 313
Murata, Kousaku, 1101
Murillo, Francisco J., 818
Murphey-Corb, Michael, 815
Murphy, George L., 1171
Murphy, John R., 239
Murray, R. G. E., 879

Nakayama, Reiko, 341, 1031
Negoro, Seiji, 9
Nelson, Michael J. K., 526
Nelson, Stephen O., 360
Nester, Eugene, 564
Neubauer, D. G., 1047
Nodasaka, Yoshinobu, 949
Nolan-Willard, Maureen, 815
Nomura, Masayasu, 1022
Novotny, Michael J., 333
Nowicki, Bogdan, 691
Nunn, David N., 718

Ogilvie, Susan, 493, 656
Ohta, Takahisa, 733
Okada, Hirosuke, 9
Orndorff, Paul E., 61
Ornston, L. Nicholas, 622, 797

Palchaudhuri, Sunil, 245
Paranchych, W., 395
Paranchych, William, 402
Paterson, Alistair, 470
Payne, Shelley M., 266
Peacock, Marius G., 982
Pearlman, Eric, 199
Pedersen-Lane, Joan, 371
Pere, Auli, 691
Perez-Casal, Jose F., 256
Perry, David, 943
Perry, J. J., 1163
Perry, Jerome J., 1171
Petráková, Eva, 408
Picken, Roger N., 430
Piérard, André, 928
Pittard, James, 169, 175
Platz, Anton, 1010
Plazinski, Jacek, 483
Poirot, Chris M., 629
Pooley, H. M., 1123
Postma, Pieter W., 360
Prakash, R. K., 785
Prehm, Peter, 299
Price, Melanie, 122
Privalle, Laura Stein, 794
Prody, Catherine, 1181
Pueppke, Steven G., 1061
Pugh, Shirley Y. R., 137

Quinones, Casilda, 438

Ramirez, Robert M., 80
Rasmussen, Beth A., 612
Raymond, Kenneth N., 304, 313
Reese, Robert T., 1165
Reeve, Carole A., 1041
Reitzer, Lawrence J., 379
Reizer, Jonathan, 333
Rhen, Mikael, 691
Ridge, Robert, 483
Rinaldi, Charles N., 233
Ritzenthaler, Paul, 600
Rivelli, Michelle, 622
Robinson, Arthur C., 546
Rodriguez-Valera, F., 478
Rodwell, Victor W., 294
Rolfe, Barry G., 483
Ron, Eliora Z., 1158
Ronson, Clive W., 903
Rosenberg, Eugene, 1146
Rosenberg, Mel, 480
Ross, Carolyn M., 279
Rownd, Robert H., 28
Ruiz-Vázquez, Rosa, 818
Rydel, James J., 36

Saier, Milton H., Jr., 333
Salvacion, Ferdinand F., 1188
Sandulache, Rodica, 299
Sarthou, Pierre, 884
Sato, Gihei, 421, 642
Satta, Giuseppe, 427
Saunders, Charles, 607
Schekman, Randy, 966
Schleifer, Karl Heinz, 273, 462
Schmidt, Brian J., 607
Schoenlein, Patricia V., 279
Schollmeier, Klaus, 499
Schreier, Harold J., 591
Sedewitz, Barbara, 273, 462
Seely, Robert J., 50
Setlow, Jane K., 662
Shankweiler, Gary W., 438
Sherwood, John E., 510, 517
Shiba, Kiyotaka, 696
Shimosaka, Makoto, 1101
Shinagawa, Morikazu, 421
Shiota, Sumiko, 445, 812
Shockman, Gerald D., 427
Signer, Ethan R., 454
Simoni, Robert D., 1055
Singer, R. A., 1196
Sjöberg, Britt-Marie, 1010
Smit, John, 1137
Smith, Gerald R., 788
Smith, Michael D., 1109
Smulski, Dana R., 391
Snyder, Clifford E., Jr., 1191
Soltyk, Anna, 1093
Spear, Kim, 1175
Spiegelberg, Renate, 546
Stewart, David B., 771
Straley, Susan C., 842
Strominger, Jack L., 822, 824
Stutzenberger, F. J., 1047
Subramanian, V., 651
Subramanian, Venkiteswaran, 1003
Sullivan, Neil F., 546, 724
Sumrada, Roberta A., 1078
Sunairi, Michio, 1037
Suzuki, Takeshi, 949

Takagi, Masamichi, 1017, 1037
Takahashi, Koui, 949
Takei, Tamako, 889
Tamura, Atsushi, 889
te Brömmelstroet, Ben W., 629
Thomashow, Michael F., 319, 327
Thompson, John, 211
Tibelius, Karl H., 103
Timmis, Kenneth N., 251
Timmons, Michael S., 1175
To, M., 569
Tobian, Janet Ash, 556
Tochikura, Tatsurokuro, 341, 1031
Tolmasky, Marcelo E., 860
Torrey, John G., 921
Triggs, Barbara L., 668
Trisler, Patsy, 184
Trombe, Marie-Claude, 849
Tropak, Michael, 1093
Tschopp, Jürg, 966
Tsuchiya, Tomofusa, 445, 812
Tsuruoka, Tsutomu, 889

Ueno-Nishio, Shizue, 379
Umeda, Kahoru, 812
Unemoto, Tsutomu, 1074
Ushiyama, Shigeru, 733

Vacante, Dominick, 36
Vadeboncoeur, Christian, 755
Vaidyanathan, C. S., 651
Väisänen-Rhen, Vuokko, 691
Valkenburg, J. A. C., 1151
van der Drift, Chris, 629
van der Meijden, Peter, 629
Vander Wauven, Corinne, 928
van Gijsegem, Frédérique, 1199
Varon, Mazal, 1146
Vasantha, N., 607
Villiger, Werner, 143
Vogels, Godfried D., 629
Volkert, Michael R., 702
von Tersch, Michael A., 854
Vreeland, R. H., 879

Wada, Chieko, 1130
Wall, Judy D., 971
Wall, Pamella R., 438
Wallace, Susan S., 895
Watabe, Ken, 1037
Weber, Peter C., 245
Weckesser, Jürgen, 107
Weinberg, Robin A., 833
Weinstock, George M., 112
Weisemann, Jane M., 112
White, Robert H., 521
Whiteley, H. R., 95
Willetts, Neil S., 395
Williams, Jim C., 982, 989, 994
Winkelman, Jeffrey W., 687
Winkler, Herbert H., 76
Winkler, Malcolm E., 279
Woldringh, C. L., 1151
Wolk, C. Peter, 781
Womble, David D., 28
Wood, W. E., 1047
Wookey, Peter J., 169
Wu, Ru Ping, 28

Yadan, Jean-Claude, 884
Yager, Lawrence N., 533, 541
Yakobson, Emanuel A., 451
Yang, Maria Y., 15
Yano, Keiji, 1017, 1037
Yanofsky, Charles, 805
Yanofsky, Martin, 564
Yasbin, R. E., 288
Yasbin, Ronald E., 458, 910
Yazyu, Hiromichi, 445
Yoshimura, Fuminobu, 949
Yother, Janet, 842
Young, Frank E., 458
Yura, Takashi, 696, 1130

Zahab, Diana M., 1105

SUBJECT INDEX

VOLUME 160

Acetolactate synthase
  resistance to sulfometuron methyl, 391
Adherence
  A. bovis, 569
  S. marcescens, 480
Aerobactin
  uptake genes, 256, 266
Agrobacterium tumefaciens
  Ti plasmid oncogenes, 319, 327
  Ti plasmids, 564
Aldolase
  S. cerevisiae, 222
n-Alkanes
  assimilation by fungi, 1171
  C. maltosa, 1037
Alysiella bovis
  adherence, 569
Ammonia
  transport, 204, 636
Ampicillin
  H. influenzae resistance, 815
Anabaena variabilis
  DNA cleavage, 781
Anacystis nidulans
  ammonia transport, 204
Anthranilate hydroxylase
  A. niger, 651
Arginase
  S. cerevisiae, 1078
Arginine deiminase
  P. aeruginosa, 928
Aspergillus fumigatus
  castanospermine, 67
  glycoprotein enzyme, 67
Aspergillus niger
  anthranilate hydroxylase, 651
Aspergillus nidulans
  sporulation, 533, 541
ATP
  Rhizobium spp., 216
  R. prowazekii, 76
  sugar transport, 333
ATPase
  E. coli, 1055
Autocide
  M. xanthus, 1146
Autolysin
  B. subtilis, 1123
Azospirillum brasilense
  hydrogenase inhibition, 103
  phosphoenolpyruvate phosphotransferase, 1204

Bacillus cereus
  respiration, 473
Bacillus licheniformis
  glutamate synthase, 591
Bacillus megaterium
  megacins, 854
Bacillus stearothermophilus
  β-galactosidase, 9
  kanamycin-inactivating enzyme, 413
Bacillus subtilis
  autolysin, 1123
  chloramphenicol acetyltransferase, 1
  DNA repair, 910
  flagellaless, 1123
  glucose dehydrogenase, 607
  neutral protease genes, 15, 442
  phage ϕ105, 1178
  plasmid transfer mediated by SP02, 458
  SOS-like system, 910
  sporulation medium, 438
Bacillus thuringiensis
  inverted repeats, 95
Bacteriophage
  ϕ105, 1178
  ϕ105C, 458
  induction of polysaccharide depolymerases, 510, 517
  lambda, 112, 175, 577, 781, 808, 1137
  M13, 95
  Mu, 112, 122, 131, 175
  Mu d1(Ap *lac*), 842
  Mu G(+), 299
  Mx8, 818
  P22, 112, 122, 131
  SP02, 458
  T1, 347, 354
  T4, 788
  T5, 1191
Bacteroides gingivalis
  fimbriae, 949
Bacteroides nodosus
  fimbriae, 740, 748
  pilin gene, 1184
Betaine
  osmoregulation in halophiles, 478
bga
  B. stearothermophilus, 9
Blue-green algae
  see Cyanobacteria

Calcium
  Y. pestis, 842
Candida albicans
  nikkomycin Z, 884
Candida lipolytica
  n-alkanes assimilation, 1171
Candida maltosa
  n-alkanes, 10
  mRNA, 1037
Carbon starvation
  E. coli, 1041
Castanospermine
  A. fumigatus, 67
cat
  B. subtilis, 1
Caulobacter crescentus
  crystalline surface assay, 1137
  trp, 279
Cellulase
  E. chrysanthemi, 1199
Cell wall
  C. burnetii, 982, 989, 994
  effect of penicillin, 889
  H. elongata, 879
  incorporation of amino acids, 889
  peptidoglycan, 889
  receptor for phage Mu G, 299
  R. salexigens, 107
  S. faecium, 935
Chemotaxis
  aromatic acids, 622, 797
  E. coli, 36, 577
  P. putida, 622, 797
  TOL plasmid, 797
cheY
  E. coli, 36
Chloramphenicol acetyltransferase
  B. subtilis, 1
chloroform
  release of periplasmic proteins, 1181
Chlorophenylacetate
  dehalogenation in *Pseudomonas* spp., 618
Citrate
  transport, 421, 642
Clostridium thermoaceticum
  hydrogenase, 466
Coenzyme A
  Pseudomonas spp., 718
Coenzyme M
  Methanosarcina spp., 521, 526
Colicin
  E. coli tolerance, 733
Coxiella burnetii
  cell wall, 982, 989
  lipopolysaccharide, 994
  peptidoglycan, 982, 989
Cryptococcus albidus
  xylan-degrading enzyme, 408
Cunninghamella elegans
  n-alkane assimilation, 1171
Cyanobacteria
  Anabaena sp. 7120, 794
  A. variabilis, 781
Cyclic AMP
  cellulose biosynthesis, 1047
  S. typhimurium, 826
  T. curvata, 1047
  white rot fungus, 470
Cyclic-2,3-diphosphoglycerate
  M. thermoautotrophicum, 50

dha
  K. pneumoniae, 55
Diad
  S. alluvius, 1105
Dicarboxylate
  R. leguminosarum, 903
Dihydroxyacetone kinase
  Klebsiella pneumoniae, 55
dsd
  E. coli, 42

Ectopic integration
  S. pneumoniae, 867
Endonuclease
  apurinic, 895
  DNA repair, 895
envA
  E. coli, 724
Erwinia carotovora
  recA, 153
Erwinia chrysanthemi

cellulase, 1199
pectinase, 1199
Escherichia coli
ATPase inhibitor, 1055
capsular polysaccharide, 184
carbohydrate transport, 360, 445, 600
carbon starvation, 1041
cell division genes, 546
cell wall, 889
chemotaxis, 36
CheY protein, 36
citrate transport, 421
clones expressing *L. pneumophila* antigens, 199
ColV, 245, 256
conjugal transfer of bacterial chromosomes, 451
conjugal transfer of DNA, 1109
control of transcription, 1022
effect of lithium, 812
envA, 724
fimbriae, 227, 691
F plasmid replication control, 1130
β-galactosidase, 112, 161
glnALG, 379
sn-glycerol-3-phosphate auxotrophy, 711
hemolysin, 161
incC, 1130
iron transport, 137, 801
kat, 668
lac promoter, 184
lacZ, 112
lon, 184
mafA, 1130
manganese, 137
membrane-derived oligosaccharides, 976
membrane permeability, 347, 354, 764
metA, 1158
metG, 1115
nucleoid visibility, 1151
outer membrane, 143, 1191
pBR322, 1188
penicillin-binding proteins, 822, 824
penicillin sensitivity, 889
peptide transport, 943
peptidoglycan, 143, 889
phage T5, 1191
phylogeny of GATC methylation, 586
pif, 192
pili, 61, 395, 402
p_L, 161
pls, 711
polA, 706
potassium transport, 1188
proton motive force, 1074
proton suicide, 687
purine-mediated growth inhibition, 1101
pyrE, 1101
pyruvate kinase, 812
pyruvate oxidase, 1088
recA, 112, 702
recBC, 788
resistance to herbicides, 391
ribonucleotide reductase, 1010
rRNA, 1022
secY, 696
D-serine deaminase, 42
ssyA3, 696
supercoiled plasmid DNA, 1017, 1168
superoxide dismutase, 137
tetracycline resistance, 1188
thymidylate synthase, 371
tolZ, 733
T1 phage infection, 347, 354
tRNA, 1022
tRNA synthetase, 805
tyrosine transport, 169, 175
uncF, 764
UV survival, 223
Ethanol
S. cerevisiae gradient, 874
Eubacteria
betaine, 478

Fimbriae
B. gingivalis, 949
B. nodosus, 740
E. coli, 227, 691, 748
fla
E. coli, 577
Flagella
B. subtilis, 1123
E. coli, 577
Frankia sp.
ammonium transport, 636
vesicles, 921
fts
E. coli, 546

β-Galactosidase
B. stearothermophilus, 9
gln
E. coli, 112, 161, 184, 612
S. typhimurium, 122, 131
E. coli, 379
Glucose dehydrogenase
B. subtilis, 607
Glucose-6-phosphate dehydrogenase
R. meliloti, 1027
Glutamate synthase
B. licheniformis, 591
γ-Glutamyltranspeptidase
P. mirabilis, 1031
sn-Glycerol-3-phosphate
E. coli, 711
Glycosidase
A. fumigatus, 67

Haemophilus influenzae
acquisition of chromosomal markers, 662
β-lactamase, 815
Haemophilus parainfluenzae
Tc^r determinants, 87
Halomonas elongata
cell wall, 879
salt tolerance, 8
Halophile
accumulation of betaine, 478
eubacteria, 478
H. elongata, 879
R. salexigens, 107
V. costicola, 385
V. parahaemolyticus, 808
Hemolysin
E. coli, 161
V. cholerae, 239
hly
E. coli, 161
Hydrogenase
A. brasilense, 103
C. thermoaceticum, 466
Rhizobium spp., 448

ilv
E. coli, 391
ilvB
S. typhimurium, 833
incC
E. coli, 1130
Inositol
starvation of *S. cerevisiae*, 80
Insertion element
IS*1*, 256
IS*10*, 499, 504
IS*121*, 1175
IS*3411*, 642
Invertase
S. cerevisiae, 80
Inverted repeat
B. thuringiensis, 95
Iron
aerobactin, 256
effect of rhodotorulic acid, 313
induction of superoxide dismutase, 137
nonheme, 651
siderophore, 313
S. pilosus, 304, 313
transport, 256, 304, 313, 801, 860

Kanamycin
plasmid-encoded resistance in *Bacillus*, 413
kat
E. coli, 668
kdg
E. coli, 600
β-Ketoadipate
R. graminis, 771
Klebsiella pneumoniae
dihydroxyacetone kinase, 55

lac
E. coli, 112
Lactobacillus casei
xylitol, 211
Lactobacillus plantarum
pyruvate oxidase, 273, 462
lacZ
E. coli, 161
Lectin
Rhizobium spp., 517
Legionella pneumophila
surface antigens, 199
Leptospira illini
motility, 1067
Lipopolysaccharide
C. burnetii, 994

Lipoteichoic acid
S. aureus, 792
Lithium
effect on *E. coli*, 812
lon
E. coli, 184

mafA
E. coli, 1130
Malaria
synchronized growth of *P. falciparum*, 1165
malE-lacZ
E. coli, 612
Mandelate
R. graminis, 778
Manganese
induction of superoxide dismutase, 137
sugar transport, 333
mdoB
E. coli, 976
Megacin
B. megaterium, 854
Membrane
alteration by methotrexate, 849
citrate, 421, 642
crystalline surface array, 1137
effect of phage T5, 1191
effect of phage T1 on permeability, 347, 354
effect of *uncF*, 764
impairment of proton permeability, 764
periplasmic gel, 143
plasma, 966
potassium, 1188
S. cerevisiae, 80, 966
S. pneumoniae, 849
Membrane-derived oligosaccharides
E. coli, 976
metA
E. coli, 1158
metG
E. coli, 1115
Methanobacterium thermoautotrophicum
cyclic-2,3-diphosphoglycerate, 50
Methanogenesis
Methanosarcina spp., 365, 521, 526, 629
Methanosarcina spp.
methanogenesis from acetate, 365, 521, 526
methyltransferase, 629
Methotrexate
effect on *S. pneumoniae* membrane, 849
Methylotroph
Pseudomonas spp., 618, 718
Mevalonate
transport by *Pseudomonas* sp., 294
Moraxella nonliquefaciens
nutritional requirements, 958
mRNA
C. maltosa, 1037
IncFII products, 28
MS-5
N. crassa, 656
Mycobacterium vaccae
propane dissimilation, 1163
Myxococcus xanthus
autocides, 1146
phage-resistant mutants, 818

Neisseria gonorrhoeae
mutagenesis, 288
Neurospora crassa
nitrogen regulation of amino acids, 493, 656
Nikkomycin Z
C. albicans sensitivity, 884
nit-2
N. crassa, 493
Nitrogenase
Anabaena sp., 794
Nitrogen fixation
Frankia sp., 921
Rhizobium spp., 216, 448, 454, 785
nmr-1
N. crassa, 656
nrd
E. coli, 1010
Nucleoid
E. coli, 1151
phage separation, 1151

Oncogene
A. tumefaciens, 319, 327
Operon
tyr-lac, 175

Pectinase
E. chrysanthemi, 1199
Penicillin
binding proteins, 822, 824
effect on amino acid incorporation, 889
Penicillium zonatum
n-alkane assimilation, 1171
Peptidase
P. mirabilis, 341
Peptide
transport, 943
Peptide permease
C. albicans, 884
Peptidoglycan
C. burnetii, 982, 989
effect of penicillin, 889
incorporation of amino acids, 889
periplasmic gel, 143
Periplasmic gel
E. coli membrane, 143
Periplasmic protein
release by chloroform, 1181
Phage
see Bacteriophage
Phanerochaete chrysosporium
cyclic AMP, 470
Phenylalanine
R. glutinis, 676
Phosphoenolpyruvate
S. mutans, 755
Phosphoenolpyruvate phosphotransferase
A. brasilense, 1204
role of enzyme III^{Glc}, 360
Phosphoglycerol transferase
E. coli, 976
mdoB, 976
pif
E. coli, 192
Pili
B. nodosus, 1184
E. coli, 61, 395, 402
Plasmid
ColB2, 402
ColE1, 600
ColV2, 245, 256, 266
effect of topoisomerase, 1168
F, 184, 192, 395, 402, 451, 1130
hly-lac fusion, 161
IncFI, 245
IncFII, 28, 87, 245
Nod Inf, 1061
NR1, 28
nrd, 1010
pAC131, 42
pACYC, 122, 131
pANN, 161
pBR322, 600, 1017, 1115, 1175, 1188
pCH, 122, 131
pGE, 112
pHUB2, 42
pIP, 87
pJM1, 860
pMC, 161
pMU, 169
pNov1, 662
pPL, 458
pRK2013, 718
pRL22, 36
pSC101, 434
pSH2, 61
pTB913, 413
pUB110, 413
pUC, 42
pVA, 1109
pVK100, 718
pWS12, 245
recA-lacZ fusion, 112
relaxation of supercoils, 1017
R/Ent, 430
RK2, 451
Sym, 483, 785
Ti, 319, 327, 564
TOL, 251, 797
trp-cheY fusion, 36
Plasmodium falciparum
synchronized growth, 1165
pls
E. coli, 711
polA
E. coli, 706
Polysaccharide depolymerases
Rhizobium spp., 510, 517
Potassium
effect of pBR322, 1188
transport, 1188
poxB
E. coli, 1088
proA
E. coli, 1175
proximity to IS*121*, 1175
Proline
transport in *S. typhimurium*, 22
Promoter
lac, 184
Propane
metabolism by *M. vaccae*, 1163
Protease
B. subtilis, 15, 438, 442
Protein kinase
S. pyogenes, 333
Proteus mirabilis
glutamyltranspeptidase, 341, 1031
Proteus vulgaris
recA, 153
Proton motive force
E. coli, 1074

Proton suicide
E. coli, 687
Pseudomonas aeruginosa
arginine deiminase mutants, 928
Pseudomonas putida
TOL plasmid, 251
toluene dioxygenase mutants, 1003
Pseudomonas spp.
chemotaxis, 622, 797
dehalogenation of chlorophenylacetate, 618
methylotrophic mutants, 718
mevalonate transport, 294
TOL plasmid, 622, 797
Purine
growth inhibition of *E. coli*, 1101
pyrE
E. coli, 1101
Pyruvate kinase
E. coli, 812
Pyruvate oxidase
E. coli, 1088
L. plantarum, 273, 462

recA
E. carotovora, 153
E. coli, 112, 153, 702
P. vulgaris, 153
S. flexneri, 153
recBC
E. coli, 788
Rhizobium japonicum
indigenous plasmids, 1061
Rhizobium leguminosarum
C_4-dicarboxylate transport genes, 903
Rhizobium meliloti
glucose-6-phosphate dehydrogenase, 1027
Rhizobium spp.
hydrogenase, 448
monoclonal antibodies, 454
nitrogen fixation, 216, 785
oriT, 451
polysaccharide depolymerases, 510, 517
ribulose bisphosphate carboxylase, 448
Sym plasmid mobilization, 483
Rhodopseudomonas capsulata
DNA repair, 971
recombination-deficient mutant, 971
Rhodospirillum salexigens
cell surface protein, 107
Rhodotorula glutinis
phenylalanine biosynthesis, 676
Rhodotorula graminis
dissimilation of aromatic compounds, 771
dissimilation of mandelate, 778
Rhodotorulic acid
effect on iron transport, 313
Ribonucleotide reductase
E. coli, 1010
Ribulose bisphosphate carboxylase
Rhizobium spp., 448
Rickettsia
ATP transport, 76
C. burnetii, 994
rRNA
control of transcription, 1022
S. typhimurium, 682

Saccharomyces cerevisiae
aldolase mutants, 222
apurinic endonucleases, 895
arginase gene, 1078
cell division, 1196
DNA repair, 895
ethanol accumulation, 874
plasma membrane assembly, 966
RNA genes, 1093
secretory mutants, 80, 966
Salmonella typhimurium
cyclic AMP phosphodiesterase, 826
β-galactosidase, 122, 131
ilvB, 833
peptide transport, 122, 131
proline uptake, 22
rRNA, 682
Schwanniomyces alluvius
diad analysis of genetic system, 1105
secY
E. coli, 696
D-Serine deaminase
E. coli, 42
Serratia marcescens
surface hydrophobicity, 480
Shigella spp.
aerobactin, 266
recA, 153
Siderophore
mediation of iron transport, 313
V. anguillarum, 860
Sinefungin
yeast mating ability, 1196
SOS system
B. subtilis, 910
Spirochete
L. illini, 1067
Spiroplasma
vitamin requirements, 488
Sporulation
A. nidulans, 533, 541
B. cereus, 473
B. subtilis, 15, 438, 442
Staphylococcus aureus
lipoteichoic acid, 792
Streptococcus faecalis
cloning vectors, 1109
conjugative mobilization of plasmids, 1109
Streptococcus faecium
cell wall, 935
temperature-sensitive cell division, 427
Streptococcus mutans
phosphoenolpyruvate phosphotransferase, 755
Tc^r determinant, 556
Streptococcus pneumoniae
ectopic integration, 867
effect of methotrexate, 849
membranes, 849
Streptococcus pyogenes
ATP-dependent protein kinase, 333
Streptococcus sanguis
conjugative mobilization of plasmids, 1109
transformation, 1109
Streptomyces pilosus
iron transport, 304, 313
Sulfometuron methyl
bacterial resistance, 391

Superoxide dismutase
E. coli, 137
induction by manganese and iron, 137

tet
E. coli, 499, 504
Tetracycline
effect on potassium transport, 1188
H. parainfluenzae, 87
S. mutans resistance, 556
Thermomonospora curvata
cellulase biosynthesis, 1047
cyclic AMP, 1047
thy
E. coli, 371
Thymidylate synthase
E. coli, 371
Toluene dioxygenase
P. putida, 1003
tolZ
E. coli, 733
Topoisomerase
E. coli, 1168
tpp
S. typhimurium, 122, 131
Transport
ammonia, 204, 636
ATP, 76
C. albicans, 884
carbohydrates, 333, 360, 445, 600
citrate, 421, 642
dicarboxylate, 903
E. coli, 169, 175
effect of methotrexate, 849
effect of rhodotorulic acid, 313
iron, 256, 266, 304, 313, 860
mevalonate, 294
peptides, 122, 131, 884, 943
potassium, 1188
proline, 22
proton suicide, 687
R. leguminosarum, 903
R. prowazekii, 76
S. cerevisiae, 80
siderophore mediated, 313, 860
S. typhimurium, 22, 122, 131
tyrosine, 169, 175
V. anguillarum, 860
Transposon
mutagenesis of TOL, 251
Tn*10*, 87, 169, 175, 499, 504, 668
Tn*1000*, 169, 175, 251
Tn*3*, 430
Tn*3411*, 642
Tn*5*, 61, 251, 451
Tn*903*, 245
Tn*A*, 815
tRNA
E. coli, 1115
tRNA synthetase
affect of overproduction, 805
trp
C. crescentus, 279
E. coli, 805
tyr
E. coli, 169, 175
Tyrosine
transport in *E. coli*, 169, 175

uncF
E. coli, 764
UV radiation
effect of pretreatment with chloramphenicol, 233
mutagenesis of *N. gonorrhoeae*, 288
rec suppression, 702
relaxation of supercoiled DNA, 1017, 1168
Vibrio anguillarum
iron transport, 860
plasmid pJM1, 860
Vibrio cholerae
hemolysin, 239
Vibrio costicola
effect of ions on protein synthesis, 385
Vibrio parahaemolyticus
shuttle vectors, 808
Xylan
C. albidus, 408
Xylitol
L. casei, 211
Yersinia pestis
Mu d1(Ap *lac*) insertion mutants, 842

U.S. Postal Service

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

Required by 39 U.S.C. 3685)

1A. TITLE OF PUBLICATION	1B. PUBLICATION NO.	2. DATE OF FILING
Journal of Bacteriology		1 October 1984
3. FREQUENCY OF ISSUE	3A. NO. OF ISSUES PUBLISHED ANNUALLY	3B. ANNUAL SUBSCRIPTION PRICE
Monthly	12	$37 mbr, $249 nonmbr

4. COMPLETE MAILING ADDRESS OF KNOWN OFFICE OF PUBLICATION *(Street, City, County, State and ZIP+4 Code) (Not printers)*
American Society for Microbiology
1913 I Street, N.W., Washington, D.C. 20006

5. COMPLETE MAILING ADDRESS OF THE HEADQUARTERS OF GENERAL BUSINESS OFFICES OF THE PUBLISHER *(Not printer)*
(same as above)

6. FULL NAMES AND COMPLETE MAILING ADDRESS OF PUBLISHER, EDITOR, AND MANAGING EDITOR *(This item MUST NOT be blank)*

PUBLISHER *(Name and Complete Mailing Address)*
(same as above)

EDITOR *(Name and Complete Mailing Address)*
Simon Silver (same as above)

MANAGING EDITOR *(Name and Complete Mailing Address)*
Walter G. Peter III (same as above)

7. OWNER *(If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given. If the publication is published by a nonprofit organization, its name and address must be stated.) (Item must be completed.)*

FULL NAME	COMPLETE MAILING ADDRESS
American Society for Microbiology	1913 I Street, N.W. Washington, D.C. 20006

8. KNOWN BONDHOLDERS, MORTGAGEES, AND OTHER SECURITY HOLDERS OWNING OR HOLDING 1 PERCENT OR MORE OF TOTAL AMOUNT OF BONDS, MORTGAGES OR OTHER SECURITIES *(If there are none, so state)*

FULL NAME	COMPLETE MAILING ADDRESS
None	

9. FOR COMPLETION BY NONPROFIT ORGANIZATIONS AUTHORIZED TO MAIL AT SPECIAL RATES *(Section 423.12 DMM only)*
The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes *(Check one)*

[X] (1) HAS NOT CHANGED DURING PRECEDING 12 MONTHS
[ ] (2) HAS CHANGED DURING PRECEDING 12 MONTHS *(If changed, publisher must submit explanation of change with this statement.)*

10. EXTENT AND NATURE OF CIRCULATION *(See instructions on reverse side)*	AVERAGE NO. COPIES EACH ISSUE DURING PRECEDING 12 MONTHS	ACTUAL NO. COPIES OF SINGLE ISSUE PUBLISHED NEAREST TO FILING DATE
A. TOTAL NO. COPIES *(Net Press Run)*	10,878	10,973
B. PAID AND/OR REQUESTED CIRCULATION 1. Sales through dealers and carriers, street vendors and counter sales	4,783	5,283
2. Mail Subscription *(Paid and/or requested)*	2,799	3,236
C. TOTAL PAID AND/OR REQUESTED CIRCULATION *(Sum of 10B1 and 10B2)*	7,582	8,519
D. FREE DISTRIBUTION BY MAIL, CARRIER OR OTHER MEANS SAMPLES, COMPLIMENTARY, AND OTHER FREE COPIES	100	100
E. TOTAL DISTRIBUTION *(Sum of C and D)*	7,682	8,619
F. COPIES NOT DISTRIBUTED 1. Office use, left over, unaccounted, spoiled after printing	3,196	2,354
2. Return from News Agents	--	--
G. TOTAL *(Sum of E, F1 and 2—should equal net press run shown in A)*	10,878	10,973

11. I certify that the statements made by me above are correct and complete

SIGNATURE AND TITLE OF EDITOR, PUBLISHER, BUSINESS MANAGER, OR OWNER
Walter G. Peter III

PS Form 3526, July 1984 *(See instruction on reverse)*